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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/879,815	06/13/2001	John Hardy Mosgaard Christensen	CHRISTENSEN1A	4286

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Washington, DC 20001

EXAMINER
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YAO, SAM CHAUN CUA

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 05/29/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/879,815

Applicant(s)

MOSGAARD CHRISTENSEN ET AL.

Examiner

Sam Chuan C. Yao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 10-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 08/669,472.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 8
- 4) ☒ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election with traverse of Group I (claims 1-9) in Paper No. 6 is acknowledged. The traversal is on the ground(s) that "... different classification for groups is largely immaterial, since it is assumed that the Examiner will search online rather than manually, and that a search which encompasses the medium would necessarily include methods of using the medium. This is not found persuasive because the recited medium (i.e. article) does not even require thermobonding fibers comprising "1-40% of the total fiber content" and "the amount of dry matter in the binder is from about 0.5-15%" which are needed in claim 1 of Group I. Equally important, as correctly noted by Applicant, the groups are assigned to different classifications; this provides a prima-facie evidence that it would be burdensome for the examiner to considered these patentably distinct groups. .

The requirement is still deemed proper and is therefore made FINAL.

***Claim Rejections - 35 USC § 112***

2. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is indefinite because it is unclear what is intended by the limitation of "1-40% of the total fiber content" and "the amount of dry matter in the binder is from about 0.5-15%". What basis is used to obtain the recited percentage range? Is it base on weight% or other basis such as percent base on mole, volume, number of fibers, etc.? It is assumed, for the purpose of examining the claims, the recited percent range is based

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on total weight percent. It is suggested for Applicant to cite a passage or passages and amend the claimed accordingly to provide a definite basis on the recited percentage range.

Claims 2-3, 8-9 are indefinite for essentially the same reason as above. What is the basis for the recited percentage ranges? For the purpose of examining these claims, it is assumed that they are all based on total weight percent.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-9 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by WO 95/18886.

It is stated in MPEP 2133.01 that "When applicant files a continuation-in part whose claims are not supported by the parent application, **the effective filing date is the child CIP**. Any prior art disclosing the invention or an obvious variant thereof having a critical reference date more than 1 year prior to the filing date of the child will bar the issuance of a patent under 35 U.S.C. 102(b). Paperless Accounting v. Bay Area Rapid Transit System, 804 F2d 659, 665, 231 USPQ 649, 653 (Fed. Cir. 1986)." (Emphasis added).

In the instance case, the following limitations do not appear to have support in the parent application:

a) "the thermobonding fibers comprise about 1-40% of the total fiber content"  
(emphasis added);

b) "the amount ... is from about 0.5-40 g. of dry matter per square meter of web surface (emphasis added).

It is suggested for Applicant to check whether the recited ranges in the dependent claims have sufficient support in the parent application. If so, Applicant should cite a passage or passages showing support to the presently claimed subject matter (i.e. recited ranges/composition).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art (APA) in view of either (LeVan (4,869,771) or Frankosky et al (US 5,225,242)) and Kennette et al (US 4,612,226).

With respect to claims 1-4, the APA, drawn to a process of making a dryformed absorbent paper, substantially discloses the process recited in claim 1 (specification; pages 1-6). Accordingly, it is known in the art to spray a latex-type resin material (i.e. water-based binder) onto a pulp web to form a self-supporting fibrous web (page 2 full paragraph 1); and, alternatively to homogenously admix binder fibers with cellulose

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fibers wherein the binder fibers are heat-activated in a heating zone (page 4 full paragraph 1, page 5 last paragraph to page 6 line 2, page 6 full paragraph 1).

The APA does not disclose combining the above conventional techniques together in forming the dryformed absorbent paper. However, it would have been obvious, to those versed in the art motivated by the desire to prevent or minimized fiber leakage, to combine the two conventional techniques together in forming the dryformed absorbent paper of the APA because LeVan, directed to a process of forming a self-sustaining fibrous batt (web) having a sealed outer surface for a minimal fiber leakage, discloses (a) blending staple fibers with binder fibers to form a staple/binder fibrous web, spraying a resin bonding agent onto the surface of the staple/binder fibrous web with a resin material to form a resin coated web and then heat-treating the resin coated web to activate the binder fibers and the resin bonding agent ( abstract, col. 2 lines 10- 15, lines 27-40); and (b) it is disadvantageous to use binder fibers alone or alternatively a resin bonding agent compared with combining both techniques together (col. 2 line 67 to col. 3 line 2).

Alternatively, it would have been obvious, to those versed in the art motivated by the desire to prevent or minimized leakage, to combine the two conventional techniques together in forming the dryformed paper of the APA because Frankosky et al suggests combining both conventional techniques of forming fibrous batt to minimize fiber leakage (abstract, col. 1 line 47, lines 55-66). It is worthnoting that Franskosky et al also suggest using a latex resin bonding agent in an amount ranging from 10-30% by weight of the batt (col. 2 lines 15-17, lines 34-59).

The APA does not teach applying a binder on the web in an amount of .5-40 grams (claim 1) or 0.5-10 grams (claim 3) or 0.5-5.0 grams (claim 8) or 5-20 grams (claim 9) of dry matter per square meter of the web surface. However, it would have

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been obvious in the art to apply the binder on the web in an amount of .5-40 grams (claim 1) or 0.5-10 grams (claim 3) or 0.5-5.0 grams (claim 8) or 5-20 grams (claim 9) of dry matter per square meter of the web surface in the modified process of the APA because, Franksosky et al implicitly suggest coating about 5 g/m<sup>2</sup> or more of the bonding resin onto the surface of the fibrous web to effectively prevent fiber leakage (note: Franksosky et al disclose that the final fibrous web has a weight basis in a range of 50-400 g/m<sup>2</sup> and further disclose that the bonding resin constitutes about 10-30% by weight of the final batt; 10% of 50 g/m<sup>2</sup> is equal to 5 g/m<sup>2</sup> (col. 2 lines 53-62; col. 3 lines 32-35); and, because those versed in the art would have determined, by routine experimentation, the suitable and sufficient amount of binder resin to apply on the web in order to effectively prevent fiber leakage on the web and the same time provide the least amount of resin binder material to reduce the cost of making the modified dryformed paper of the APA.

Lastly, the APA modified by either LeVan or Frankosky et al does not expressly teach the amount of dry matter in a resin binder; wherein the amount is 0.5-15% (claim 1) or 0.5-10% (claim 2) by weight to the web. However, it would have been obvious in the art to provide a latex resin binder having the amount of dry matter recited in claim 1 or 2 in forming the modified dryformed absorbent paper of the APA because one in the art would have determined a suitable latex binder composition needed to be applied to the modified process of the APA (i.e. such is taken to be result effective variable routinely optimize by those versed in the art for the desired end-use of the absorbent paper); and because it is old in the art of making cellulose absorbent webs of the type taught by the APA to apply a dilute latex binder where the amount of solid binder is in the range of .about .5-5% by weight as exemplified in the teachings of Kennette et al (abstract; col. 1 lines 10-28; col. 3 lines 29-45). Only the expected result of effectively

sealing the surface of a resultant dryformed absorbent paper would have been achieved.

Note: it is a common practice in the art to determine, by routine experimentation, the amount of binder to apply to a fiber web in order to satisfactorily balance a trade-off between good resistance to defiberization or delamination, and good hand-feel or comfort on a resultant fiber web. The art would have understood and appreciated that the amount of resin binder needed to effectively bond and seal the modified dryformed absorbent paper of the APA depends on a number of factors such as the amount of binder fibers, amount of pulp fibers, thickness of the paper web, etc.

With respect to claims 5-6, since it is conventional in the art of making absorbent article to provide a super-absorbent material in between two outer absorbing web layers or to homogeneously distribute super-absorbent material in a fiber web in order to enhance the fluid absorbing capacity of a resultant absorbent fibrous web per unit weight; the limitations in these claims would have been obvious in the art forming the modified dryformed absorbent paper of the APA.

With respect to claim 7, the art conventionally provides pigment material(s) to provide a desired color to a resultant web product. Absent any showing of unexpected benefit, it would have been an obvious expediency and well within the purview of choice in the art to apply a well known technique of providing pigment material(s) to a web by admixing pigments into the binder to provide a desired color to the modified dryformed absorbent paper of the APA.

With respect to claims 8-9, since Franskosky et al also disclose using about 4-30% by weight of binder fibers (col. 1 lines 6-62) and as noted above also disclose coating about 5 g/m<sup>2</sup> or more of binder resin; since the only expected result of providing a suitable amount of resin binder and a suitable amount of binder fibers to



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effectively bond and seal the modified dryformed absorbent paper of the APA would have been achieved; and since these limitations are taken to be result effective variables often optimized by routine experimentation in the art, the limitations in these claims would have been obvious in the art making the modified dryformed absorbent paper of the APA. It is worth noting that, APA discloses providing about 15% of binding fibers and about 85% cellulose fibers (taken to be based on total weight basis; page 4 toward the bottom of full paragraph 2).


**Conclusion**

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Chuan C. Yao whose telephone number is (703) 308-4788. The examiner can normally be reached on Monday-Friday with second Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael W Ball can be reached on (703) 308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7115 for regular communications and (703) 305-7718 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

  
Sam Chuan C. Yao  
Primary Examiner  
Art Unit 1733

scy  
May 20, 2002